

FITC [FITC Isomer I; fluorescein-5-isothiocyanate]

Cat #: B-CHM100

Size: 100 mg

Storage: Store at -20°C protected from light.

Product Introduction

FITC (Fluorescein Isothiocyanate) can bind to various antibody proteins without losing their specificity for a particular antigen. Once bound, the antibody exhibits strong yellow-green fluorescence in alkaline solutions. Qualitative, localization, or quantitative detection of the corresponding antigen can be performed by observing under a fluorescence microscope or analyzing with flow cytometry. It is used in various fields such as medicine, agriculture, and veterinary science for rapid diagnosis of diseases caused by bacteria, viruses, parasites, and other pathogens.

Product Properties

Formula: C₂₁H₁₁NO₅S

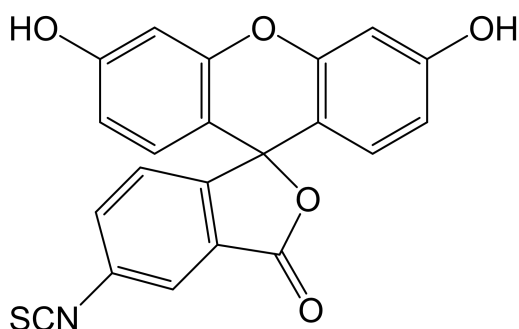
MW: 389.38

Purity: ≥95% (HPLC)

Spectral properties: Ex / Em = 490 / 525 nm

Appearance: Yellow powder

Structural formula



Shipping and Storage

Storage conditions: Store at -20°C protected from light.

Stability: Stable for at least 12 months under proper storage conditions.

FITC-labeled antibody protocol:

(1) Dialyze the protein to be cross-linked (concentration: 1 mg/mL) against the cross-linking reaction buffer three times at 4°C, adjusting the pH to 9.0. Preparation of the cross-linking buffer: Dissolve 7.56 g NaHCO₃, 1.06 g Na₂CO₃, and 7.36 g NaCl in water to a final volume of 1 L.

(2) Dissolve FITC in DMSO at a concentration of 1 mg/mL. Prepare fresh FITC solution for each cross-linking reaction and avoid exposure to light.

(3) Add FITC slowly to the antibody solution at a ratio of P:F (protein:FITC) = 1 mg:150 µg. Gently mix the solution while adding FITC to ensure uniform mixing with the antibody. Allow the reaction to proceed at 4°C in the dark for 8 hours.

(4) Add 5 mol/L NH₄Cl to a final concentration of 50 mmol/L to stop the reaction at 4°C for 2 hours.

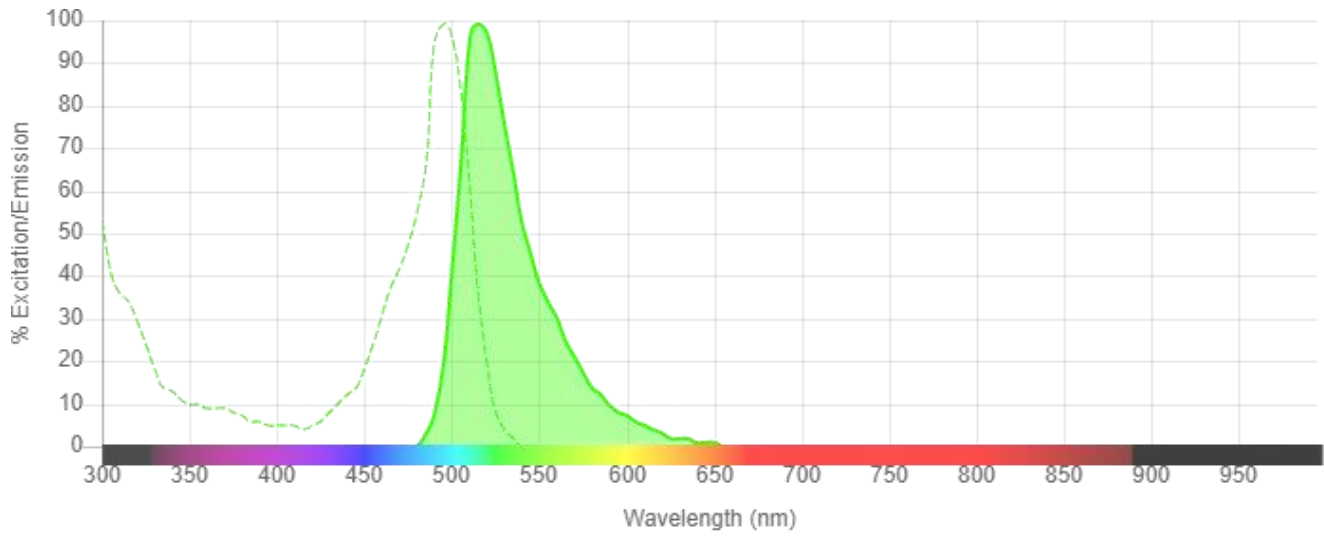
(5) Dialyze the conjugates against PBS solution at least four times until the dialysate becomes clear.

(6) Characterization of the cross-linked material:

Protein concentration (mg/mL) = $[A_{280} - 0.31 \times A_{495}] / 1.4$

F/P ratio: $3.1 \times A_{495} / [A_{280} - 0.31 \times A_{495}]$. This value should be between 2.5 ~ 6.5.

(7) Store the FITC protein conjugates in a PBS at pH 7.4, supplemented with 0.1% NaN₃ and 1% BSA, store at 4°C in the dark.



Note:

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.